

Office Action Summary

Application No.

10/808,305

Applicant(s)

GOMI, YUICHI

Examiner

Kent Wang

Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 07/01/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The reference listed on the disclosure statement (IDS) submitted on 07/01/2004 has being considered by the examiner (see attached PTO 1449).

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 6-9 are rejected under 35 U.S.C. § 102(b) as being anticipated by Yoneyama, US 6,480,227.

Regarding claim 1, Yoneyama discloses an XY-addressing type solid-state imaging apparatus comprising:

- a plurality of pixels (i.e. a picture element matrix-1) arranged in a two-dimensional matrix (col. 8, lines 32-35); and

- a horizontal scanning circuit (7) and a vertical scanning circuit (3) for reading signals of the pixels (e.g. for a non-destructive readout, col. 8, line 33 et seq);
- wherein vertical scanning circuit (3) concurrently selects the pixels of n rows at a first timing (e.g. first and second rows are selected simultaneously; col. 15 lines 3-4) to concurrently effect a reset operation of the pixels of the n rows thereof and selects at a second timing subsequent to the first timing the pixels of n rows of the address different from the rows selected at the first timing (e.g. third and fourth rows are the simultaneously read out ; col. 15 lines 12-15) to effect a reset operation of the pixels of the n rows thereof, reset operation in this manner being repeated to effect a reset operation of all pixels (e.g. reading out n-rows at a time every other n-rows; col. 15 lines 22-42).

Regarding claim 2, Yoneyama discloses the pixels of the n rows concurrently selected for the reset operation to be effected are the pixels of the rows having consecutive addresses (e.g. reading out n-rows at a time and each row is sequentially selected by vertical scanning circuit; in accordance with Merriam-Webster, consecutive and sequentially are synonyms) (see col. 15, lines 40-42 and lines 55-66, respectively).

Regarding claim 3, Yoneyama discloses the pixels of the n rows concurrently selected for the reset operation to be effected are the pixels of the rows having discrete addresses (e.g. simultaneously read out the first, third, fifth, seventh,..., $2n+1$ th rows

Art Unit: 2609

and the second, fourth, sixth, eighth,..., 2nth rows are then read out; discrete and discontinuous are synonyms) (see col. 15, lines 22-32).

Regarding claim 4, Yoneyama discloses the vertical scanning circuit comprises:

- a row selecting section (i.e. a shift register); and
- a timing pulse generating section (i.e. switching device) to which output signals of the row selecting section (e.g. scanning signals ϕT_i and ϕD_i are outputted) and timing signals (CK3) are inputted to generate control signals (CNT3) for effecting pixel operation (see col. 9, lines 26-39).

Regarding claim 6, Yoneyama discloses a row selecting section (i.e. shift register) comprises a shift register.

Regarding claim 7, Yoneyama discloses a timing pulse generating section (i.e. switching device) comprises a logic circuit (i.e. control switching device QG_{ij}).

Regarding claims 8 and 9, these claims are recited same limitations as claim 7. Thus they are analyzed as previously discussed with rejected to claim 7 above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Yoneyama in view of Kochi, US 6,947,088.

Regarding claim 5, Yoneyama discloses a solid-state imaging apparatus comprising a vertical scanning circuit. Yoneyama does not explicitly disclose the vertical scanning circuit comprises a decoder.

Kochi discloses a vertical scanning circuit comprises a decoder circuit (see col. 5, lines 49-51). Yoneyama and Kochi are analogous art because they are from the same field of endeavor of an XY-addressing type solid-state imaging sensor for an image pickup device. At the time of the invention, it would have been obvious to a person of the ordinary skill in the art to use Kochi's encoder circuit in Yoneyama's solid-state imaging device. The suggestion/motivation would have been to enable the vertical scanning circuit to freely select the pixel column selection order, thereby can realize various signal read-out orders in comparison with the shift register circuit (col. 5, lines 50-56).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Lee et al. (US 6,466,265) disclose an active pixel sensor formed by creating

an X-Y array of pixels on a semiconductor substrate.

- Juen (US 6,542,194) disclose an imaging device performs moving image shooting in which smearing does not occur and further performs a still image shooting by a sufficiently accurate shutter operation.

- Yonemoto (US 5,894,325) discloses a solid image pickup unit which is capable of preventing the brightness of a reproduced screen from changing due to handshake correction and which is thus able to obtain a natural photographed image.
- Terada et al. (US 6,124,888) disclose an image pickup apparatus for picking up an object comprises an image pickup device formed by arranging the photoelectric conversion elements constituting pixels in two-dimensional directions.

Inquiries

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kent Wang whose telephone number is 571-270-1703. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on 571-272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-270-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Art Unit: 2609

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kent Wang

30 April 2007


CHANH D. NGUYEN
SUPERVISORY PATENT EXAMINER